SOLE CONSTRUCTION FOR ENERGY STORAGE AND REBOUND

Cross-Reference to Related Applications

This application is a continuation of U.S. Application No. 10/004,533 filed December 3, 2001 and is related to and claims the benefit of U.S. Provisional Application No. 60/250,545, filed December 1, 2000.

Background of the Invention

Field of the Invention

The present invention generally relates to articles of footwear, and more particularly, to a sole construction that may be incorporated into athletic footwear or as an insert into existing footwear and the like in order to store kinetic energy generated by a person. The sole construction has a combination of structural features enabling enhanced storage, retrieval and guidance of wearer muscle energy that complement and augment performance of participants in recreational and sports activities.

Description of the Related Art

From the earliest times when humans began wearing coverings on their feet, there has been an ever present desire to make such coverings more useful and more comfortable. Accordingly, a plethora of different types of footwear has been developed in order to meet specialized needs of a particular activity in which the wearer intends to participate. Likewise, there have been many developments to enhance the comfort level of both general and specialized footwear.

The human foot is unique in the animal kingdom. It possesses inherent qualities and abilities far beyond other animals. We can move bi-pedially across the roughest terrain. We can balance on one foot, we can sense the smallest small grain of sand in our shoes. In fact, we have more nerve endings in our feet than our hands.

We literally roll forward, rearward, laterally and medially across the bony structures of the foot. The key word is "roll." The muscles of the foot and ankle system provide a controlled acceleration of forces laterally to medially and vise-versa across the bony structure of the foot. In bio-mechanical terms these motions are referred to as